



Term 2 2021: SciSpies Club – Years 1 and 2
Venue: Canberra Girls Grammar School, Grey Street, DEAKIN
Term Fee: \$285

The World is Alive with the Sounds of Science

We all know the world around us is full of science – in how the earth beneath our feet is moulded, in how our eyes see it, in how we and other creatures can be identified among many other phenomena.

This semester the SciSpies will get in tune with ticking timers, swishing air-borne seeds, crunching catapults and zooming neural pathways – and see how it all comes together in a glorious symphony of science!

Meeting 5: Unsinkable
Focus: STEM

The story of the (at the time) record-breaking cruise liner Titanic is well known – how the supposedly unsinkable steamship sank. But what about other kinds of boats? Sailboats, for example – they can tip a long way over before capsizing thanks to the integration of a part known as the ballast. But what about other watercrafts? This afternoon, one of Archimedes' well-known principles will underpin our experiments in hydrodynamics. You'll be buoyant with excitement!

Meeting 6: Nanostructures
Focus: Scientific Method, Data Analysis

Engineers continue to create high-tech materials for that promise to be lighter and stronger with each new advancement. How is this possible? The answer is in the nanoscale! Using nanotechnology, scientists can play around with the detailed structure of matter, leading to a whole new range of materials, some with amazing qualities. SciSpies will get a glimpse into the exciting nanoworld by exploring how arranging material in different ways can drastically change the strength of the final product. Get ready to learn some basic origami, and if you already know some, you'll be surprised how those skills will come in handy!

Meeting 7: Curious Catapults
Focus: Critical thinking

Ready, aim, fire! Come armed in preparation for a session in medieval defence as we examine the form, function and fun of a catapult. While we won't be aiming to bring down fortress walls or castle turrets with some of our own design and construction, we will be experimenting with how we can get models of these machines to capitalise on laws of aerodynamics to hit tricky targets from afar. Build on your knowledge of physics and implement a creative design and you might be on track for a bullseye!

Meeting 8: Your Feet are my Dinner
Focus: Biological Science, Adaptation

Did you know that butterflies smell with their feet? Or that slugs have four noses? How about that it takes a sloth two weeks to digest its dinner? Crazy stuff – the animal kingdom is truly remarkable. Some species have adapted body parts to suit their environments while others have honed their extraordinary senses to survive. Speaking of the senses, while humans can rely on their senses of hearing, sight, taste, touch and smell, animals have an even bigger range – some species can even detect ultraviolet light or magnetic or electric fields. Wow! Today we'll learn all about these amazing developments and look at how they might hybridize in the future to create the first ever 'super animal'!

What to bring:

- A well-stocked pencil case (this includes grey lead pencils, coloured pencils, coloured textas, sharpener, eraser, ruler, scissors & glue stick)
- A notebook

About the Club Leader: Chelsea Glenn

Chelsea is a committed educator who has taught in a variety of school settings to provide authentic and engaging learning experiences for her students. She is experienced with the International Baccalaureate, Primary Years Program Framework. Chelsea is passionate about facilitating learning through hands-on experiences that encourages creativity and higher-order thinking. She believes that learning is a lifelong process and encourages others to continuously ask questions to make sense of the world. Chelsea enjoys participating in charitable events to raise awareness for different causes and gains a great sense of personal achievement when helping others. She is also passionate about environmental conservation, health and nutrition.